UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,130	03/17/2004	John Paul Russell	920476-95751	4878

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EXAMINER
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ART UNIT	PAPER NUMBER
4181	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/803,130	RUSSELL ET AL.
	Examiner	Art Unit	
	Anh Ngoc Nguyen	4181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*17 March 2004*</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>*03/17/2004*</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities: continuation

information missing on page .1 of the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section .102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived
> by the manner in which the invention was made.

2.   Claims 1 – 2 and 8 –10 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Baran et al (4,771,425) in view of Koford et al (4,377,862).

Consider claim 1, Baran discloses a method for transporting frame based packet data into

a synchronous transmission communications network, said method comprising the steps of:

inputting said encoded packet data frame into a synchronous data channel (see col. 2 lines 34 -

46, where Baran discusses formatting data into a packet frame and sending packets to

synchronous communication format).

Baran does not specifically disclose encoding at least one packet data frame with a code

which designates a boundary of said frame. Koford teaches encoding at least one packet data

frame with a code which designates a boundary of said frame (see col. 6 lines 23 – 40 and col. 12 lines 7 – 15, where Koford discusses inserting a zero bit following a string of five one bits therefore setting a boundary).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the invention of Baran, and use bit stuffing algorithm, as taught by Koford, thus a significant need for a reliable, sophisticated error control technique, as discussed by Koford (see col. 2 lines 9 - 20).

Consider claim 2, Koford discloses the code is recognizable by a synchronous communications protocol as designating a boundary of a said data frame (see col. 6 lines 23 – 40 and col. 12 lines 7 – 15, where Koford discusses inserting a zero bit following a string of five one bits therefore setting a boundary).

Consider claim 8, Koford discloses the step of encoding at least one packet data frame comprises applying a consistent overhead byte stuffing algorithm to said data frame (see col. 6 lines 23 – 40, col. 12 lines 46 – 53 and col. 12 lines 58 – 63, where Koford discusses bit stuffing algorithm and 8 bits preparing for transmission after insertion of zero, plus a byte consists of 8 bits).

Consider claim 9, Koford discloses the step of encoding at least one packet data frame comprises: applying a coding algorithm to said packet data frame which identifies a boundary of said data frame by appending a fixed number of bits to said data frame, irrespective of a size of said data frame (see col. 6 lines 23 – 40 and col. 12 lines 7 – 15, where Koford discusses bit stuffing algorithm and inserting a zero bit following a string of five one bits therefore setting a boundary).

Consider claim 10, Koford discloses the step of encoding at least one packet data frame

comprises: applying a coding algorithm to said data frame which identifies a boundary of said

data frame by appending a fixed number of bits to said data frame, irrespective of a data content

of said data frame (see col. 6 lines 23 – 40 and col. 12 lines 7 – 15, where Koford discusses bit

stuffing algorithm and inserting a zero bit following a string of five one bits therefore setting a

boundary).

3.   Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baran et

al (4,771,425) in view of Koford et al (4,377,862) and further in view of Jeong (5,675,584).

Consider claim 3, Baran and Koford disclose formatting data into a packet frame and

sending it over a communication line, however Baran and Koford do not specifically disclose

the step of encoding at least one packet data frame comprises: appending a fixed pointer

describing a position of a said boundary within a data stream containing said packet data frame,

said fixed pointer appended into said synchronous digital channel. Jeong discloses data is

encoded and appending a fixed pointer describing a position of a said boundary within a data

stream containing said packet data frame, said fixed pointer appended into said synchronous

digital channel (see col. 14 lines 12 – 38, where Jeong discusses the pointer).

It would have been obvious to one ordinary skilled in the art at the time the invention was

made to modify the invention of Baran and Koford, and use pointers, as taught by Jeong, thus,

providing for high speed communications among different chips on a circuit board, as discussed

by Jeong (see col. 1 lines 14 - 20).

Consider claim 5, Baran and Koford do not specifically disclose the method as claimed in

claim 2, wherein said fixed pointer comprises a pointer designating a start of said packet data

frame. Jeong discloses fixed pointer comprises a pointer designating a start of said packet data

frame (see col. 14 lines 12 – 38, where Jeong discusses the pointer points to the clock phase

representing the first bit of the data in each byte).

It would have been obvious to one ordinary skilled in the art at the time the invention was

made to modify the invention of Baran and Koford, and use pointers, as taught by Jeong, thus,

providing for high speed communications among different chips on a circuit board, as discussed

by Jeong (see col. 1 lines 14 - 20).

4.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baran et al

(4,771,425) in view of Koford et al (4,377,862) and further in view of Hillman et al (5,493,570).

Consider claim 4, Baran and Koford do not specifically disclose the method as claimed in

claim 2, wherein a said fixed pointer comprises a pointer designating an end of said packet data

frame. Hillman discloses a said fixed pointer comprises a pointer designating an end of said

packet data frame (see abstract and col. 2 lines 34 – 47, where Hillman discusses end of packet

is detected using a comparator coupled to the input pointer).

It would have been obvious to one ordinary skilled in the art at the time the invention was

made to modify the invention of Baran and Koford, and detect end of packet, as taught by

Hillman, thus providing a high speed serial bus system which uses a low latency

resynchronization circuit, as discussed by Hillman (see col. 1 lines 53 - 56).

5.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baran et al

(4,771,425) in view of Koford et al (4,377,862) and further in view of Nakano et al (5,206,858).

Consider claim 6, Baran and Koford do not specifically the method as claimed in claim 2,

wherein said pointer designates a position of a said boundary within a synchronous virtual

container. Nakano discloses pointer designates a position of a said boundary within a synchronous virtual container (see abstract, where Nakano discusses the pointer of the virtual container).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the invention of Baran and Koford, and use pointers, as taught by Nakano, thus, altering the size of a virtual container and rapid alteration of virtual container using a new data flag, as discussed by Nakano (see col. 1 lines 50 - 54).

6.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baran et al (4,771,425) in view of Koford et al (4,377,862) and further in view of Ohde et al (5,629,939).

Consider claim 7, Baran and Koford do not specifically disclose the method as claimed in claim 1, wherein said step of encoding at least one packet data frame comprises: partitioning said packet data frame into a plurality of bytes; for each byte appending an extra bit indicating that said corresponding respective byte comprises part of said packet data frame; and for a last byte of said packet data frame, appending an extra bit indicating that said byte constitutes a last byte of said data frame. Ohde discloses the step of encoding at least one packet data frame comprises: partitioning said packet data frame into a plurality of bytes; for each byte appending an extra bit indicating that said corresponding respective byte comprises part of said packet data frame; and for a last byte of said packet data frame, appending an extra bit indicating that said byte constitutes a last byte of said data frame (see col. 1 lines 45 – 62, where Ohde discusses a bit F positioned at a lead end of the frame).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the invention of Baran and Koford, and position an extra bit at the lead end of

the frame, as taught by Ohde, thus rearranging multiple signals in an optical subscriber line so

that a primary rate signal has a predetermined format, as discussed by Ohde (see col. 1 lines 9 -
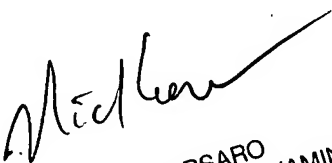
15).

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Anh Ngoc Nguyen whose telephone number is 5712705139. The

examiner can normally be reached from 8AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nick Corsaro can be reached on 5712727876. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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